## **ABSTRACT**

A set of 4,7-dichlororhodamine compounds useful as fluorescent dyes are disclosed having the structures

wherein R<sub>1</sub>-R<sub>6</sub> are hydrogen, fluorine, chlorine, lower alkyl, lower alkene, lower alkyne, sulfonate, sulfone, amino, amido, nitrile, lower alkoxy, linking group, or, when taken together, R<sub>1</sub> and R<sub>6</sub> is benzo, or, when taken together, R<sub>4</sub> and R<sub>3</sub> is benzo, R<sub>7</sub>-R<sub>10</sub>, R<sub>12</sub>-R<sub>16</sub> and R<sub>18</sub> may be hydrogen, fluorine, chlorine, lower alkyl, lower alkene, lower alkyne, sulfonate, sulfone, amino, amido, nitrile, lower alkoxy, linking group; R<sub>11</sub> and R<sub>17</sub> may be hydrogen, lower alkyl, lower alkene, lower alkyne, phenyl, aryl, linking group; Y<sub>1</sub>-Y<sub>4</sub> are hydrogen, lower alkyl, or cycloalkyl, or, when taken together, Y<sub>1</sub> and R<sub>2</sub>, Y<sub>2</sub> and R<sub>1</sub> Y<sub>3</sub> and R<sub>3</sub>, and/or Y<sub>4</sub> and R<sub>4</sub> is propano, ethano, or substituted forms thereof; and X<sub>1</sub>-X<sub>3</sub> taken separately are hydrogen, chlorine, fluorine, lower alkyl, carboxylate, sulfonate, hydroxymethyl, and linking group, or any combinations thereof. In another aspect, the invention includes reagents labeled with the 4,7-dichlororhodamine dye compounds, including deoxynucleotides, dideoxynucleotides, and polynucleotides. In an additional aspect, the invention includes methods utilizing such dye compounds and reagents including dideoxy polynucleotide sequencing and fragment analysis methods.

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